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Architectural and Transportation Barriers Compliance Board

36 CFR Part 1191

Americans With Disabilities Act Accessibility Guidelines; Petition for Rulemaking on Accessible Automated Teller Machines; Proposed Rule

ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD

36 CFR Part 1191

[Docket 92-1]

Americans With Disabilities Act Accessibility Guidelines; Petition for Rulemaking on Accessible Automated Teller Machines

AGENCY: Architectural and Transportation Barriers Compliance Board.

ACTION: Petition for rulemaking.

SUMMARY: The American Bankers Association, NCR Corporation, and InterBold have filed a petition requesting the Architectural and Transportation Barriers Compliance Board to amend the reach range requirement for accessible automated teller machines (ATMs) under the Americans with Disabilities Act Accessibility Guidelines (ADAAG). ADAAG currently requires that accessible ATMs provide for a parallel approach and both a forward and side reach to the highest control for wheelchair users. The Board is considering amending ADAAG to specifically incorporate dimensions for vertical and horizontal reaches to the highest control from a parallel approach and requests comments on the matter. The dimensions will be determined through this rulemaking.

DATES: Comments should be received by June 5, 1992. Comments received after this date will be considered to the extent practicable.

In addition, the Board has scheduled a public hearing in Washington, DC on May 28, 1992, 9 a.m. to 5 p.m., to hear from ATM manufacturers, banks, individuals with disabilities, and others who will be affected by the rulemaking.

ADDRESSES: Comments should be sent to the Office of the General Counsel, Architectural and Transportation Barriers Compliance Board, 1331 F Street, NW., suite 1000, Washington, DC 20004-1111. The petition and comments are available for inspection at this address from 9 a.m. to 4 p.m. on regular business days.

The public hearing will be held at the Holiday Inn Crown Plaza, 775 12th Street, NW., Salon C, Washington, DC 20004.

FOR FURTHER INFORMATION CONTACT: James Raggio, Office of the General Counsel, Architectural and Transportation Barriers Compliance Board, 1331 F Street, NW., suite 1000, Washington, DC 20004-1111. Telephone (202) 272-5434(Voice); (202) 272-5449(TDD). These are not toll-free numbers. This document is available in accessible formats (cassette tape, braille, large print, or computer disc) upon request.

SUPPLEMENTARY INFORMATION:

Current ADAAG Requirements

On July 26, 1991, the Architectural and Transportation Barriers Compliance Board published the Americans with Disabilities Act Accessibility Guidelines (ADAAG) to assist the Department of Justice in establishing accessibility standards for new construction and alterations in places of public accommodation and commercial facilities covered by title III of the Americans with Disabilities Act. See 56 FR 35408 (July 26, 1991), as corrected at 56 FR 38174 (August 12, 1991) (36 CFR part 1191, appendix A). On the same day, the Department of Justice adopted ADAAG as the accessibility standards for title III of the Americans with Disabilities Act. See 56 FR 35544, 35602 (July 26, 1991) (28 CFR 36.406).

Consistent with the legislative history, ADAAG includes specific provisions for accessible automated teller machines (ATMs).[1] Where ATMs are provided in new construction, one machine at each location must comply with the technical requirements for accessible ATMs. See ADAAG 4.1.3(20). If existing buildings are altered for ATMs, one machine at each altered location must comply with the technical requirements for accessible ATMs. See ADAAG 4.1.5 and 4.1.6(1)(b).

ADAAG 4.34 contains the technical requirements for accessible ATMs. ADAAG 4.34.1 requires that accessible ATMs be on an accessible route. ADAAG 4.34.2 provides that controls for user activation must be operable with one hand without tight grasping, pinching, or twisting of the wrist and not require more than 5 lbs to activate. ADAAG 4.34.4 requires that instructions and all information for use be made accessible to and independently usable by persons with vision impairments.

ADAAG 4.34.3 addresses the minimum clear floor space needed for a wheelchair user to approach an accessible ATM and the maximum height for placement of controls so that a wheelchair user can reach them.[2] ADAAG 4.34.3 provides that:

> Free standing or built-in units not having a clear space under them shall comply with 4.27.2 and 4.27.3 and provide for a parallel approach and both a forward and side reach to the unit allowing a person in a wheelchair to access the controls and dispensers.[3]

The dimensions for wheelchair approaches and reach ranges are contained in ADAAG 4.2.4 through 4.2.6 and the accompanying figures. These sections and the accompanying figures are taken from the "American National Standard Specifications for Making Buildings and Facilities Accessible to and Usable by Physically Handicapped People" (ANSI A117.1—1980). The minimum clear floor space required to accommodate a single, stationary wheelchair and occupant is 30 inches by 48 inches. See ADAAG 4.2.4.1 and Figure 4(a).[4] For a parallel approach, this space is positioned with the longer dimension (48 inches) parallel and adjacent to the object to be reached. See Figure 4(c). For a forward approach, this space is positioned with the shorter dimension (30 inches) parallel and adjacent to the object to be reached. See Figure 4(b).

The highest side reach allowed is 54 inches from the floor where the distance from the wheelchair to the object to be reached does not exceed 10 inches. See ADAAG 4.2.6 and Figure 6(b). If the side reach is over an obstruction that exceeds 10 inches, the highest side reach allowed is 46 inches from the floor. See ADAAG 4.2.6 and Figure 6(c). The obstruction may not be more than 34 inches high and 24 inches deep. See id.

The highest forward reach allowed is 48 inches from the floor. See ADAAG 4.2.5 and Figure 5(a). If the forward reach is over an obstruction, clear floor space must be provided under the obstruction that equals or exceeds the distance from the front edge of the obstruction to the object to be reached. See ADAAG 4.2.5 and Figure 5(b). The

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[1] The House Report states as follows with respect to ATMs:

> For new construction and alterations, the purpose is to ensure that the service offered to persons with disabilities is equal to the service offered to others. It would be a violation of this title [title III] to build a new bank with ATMs that were not readily accessible to and usable by persons with disabilities. It is not sufficient that the person with a disability can conduct business inside the bank. The ATMs provide an additional service which must be made available to persons with disabilities. H. Rept. 101-485, pt. 3, at 63.

[2] Drive-up only ATMs are not required to comply with the approach and reach range requirements for controls. See ADAAG 4.1.3(20) Exception.

[3] ADAAG 4.27.2 and 4.27.3 generally address controls and equipment such as light switches and paper cup and towel dispensers. These sections allow a forward or a parallel approach to the object and require the highest operable part of a control to be placed within at least one of the reach ranges specified in ADAAG 4.2.5 (forward reach) and 4.2.6 (side reach).

[4] If a clear floor space is located in an alcove or otherwise confined on all or part of three sides, additional maneuvering clearances may be required. See ADAAG 4.2.4.2 and Figures 4 (d) and (e).

distance from the front edge of the obstruction to the object to be reached may not exceed 25 inches. See id. If the forward reach over an obstruction is between 20 inches and 25 inches, the highest forward reach allowed is 44 inches from the floor. See id.

These reach ranges were based on anthropometric data for wheelchair users and represent "maximum" reach limits as opposed to "comfortable" reach zones.

The Petition

On December 2, 1991, the Board received a letter from the American Bankers Association (ABA) requesting the Board to clarify the approach and reach range requirements for accessible ATMs. The ABA noted that ADAAG 4.27.2 and 4.27.3, which are referenced in ADAAG 4.34.3 and generally address controls and equipment such as light switches and paper cup and towel dispensers, allow a forward or a parallel approach and require the highest operable part of a control to be placed within at least one of the reach ranges specified in ADAAG 4.2.5 (forward reach) and 4.2.6 (side reach). The Board's General Counsel responded that ADAAG 4.34.3 specifically states that "a parallel approach and both a forward and side reach" must be provided to the highest control on accessible ATMs and that the reach range requirement can be met by installing the machine so that the highest control is not more than 48 inches from the floor.

On February 24, 1992, the ABA, NCR Corporation, and InterBold [5] filed a petition requesting the Board to amend ADAAG 4.34.3 to allow either a side reach or forward reach to the highest control on accessible ATMs.[6] The petitioners claim that ATM manufacturers, relying on ANSI A117.1 and ergonomic studies, have developed ATMs which allow only a side reach to the highest control. Petition at 6. They contend that a forward reach would require bending and substantial downward adjustment of the arms and hands from a standing position, making some current ATM models less comfortable for others to use, as well as presenting difficulties for persons with vision impairments and persons who use walkers, canes, braces, crutches, and leg prostheses. Petition at 7. The petitioners also claim that a forward reach would require ATM controls to be installed on the same vertical plane as the wall instead of recessed or set back into the wall, compromising security and privacy. Petition at 7. They further claim that a side reach provides more functional space for ATMs to offer additional features such as postage stamps, mass transit tickets, and voice response for persons with vision impairments. Petition at 8. Finally, the petitioners contend that ATM manufacturers will incur significant costs to redesign their products for a forward reach and that the market for current and used ATMs will be adversely affected. Petition at 8–11.

Current ATM Models

The Board has requested the three leading manufacturers who sell ATMs in the United States to provide information about the highest control on their current ATM models.[7] The information is summarized in Table 1 attached to this document. The companies currently market 18 ATM models, excluding drive-up only models.[8] The models include walk-up units that are designed to be installed through-the-wall; and lobby units that may be used as a free-standing machine or installed in an enclosure. Some ATMs are full-function machines that dispense cash, accept deposits and payments, and provide information such as account balances. Other ATMs perform a single function: dispense cash only or provide information only (noncash). There is also an interactive sales platform ATM that can perform various other banking services.

Current ATM models are designed so that the controls are recessed or set back into the wall or the unit for privacy and security purposes. The horizontal reach to the highest control, as measured from the vertical plane of the wall for walk-up ATMs installed through-the-wall and from the base of the unit for free-standing lobby ATMs, ranges from 1½ inches to 16⅝ inches. See Table 1 attached to this document.[9] Banks usually place surrounds around ATMs which typically contain writing counters and bins for envelopes and waste paper that project into the clear floor space provided for the parallel approach adjacent to the machine and extend the horizontal reach to the highest control. When ATMs are installed in exterior walls of buildings, the horizontal reach to the highest control can also be increased by decorative details on building facades which are especially common on older buildings.

In addition to wide variations in the horizontal reach to the highest control, ATMs differ from light switches and paper cup and towel dispensers in other ways. Operating a light switch and removing a paper cup or towel from a dispenser involves a single motion. To operate an ATM, a person must perform a range of motions:

- Insert bank card into card reader;
- Enter personal identification number on numeric keypad;
- Select transaction (deposit, withdrawal, payment, information) using function keys;
- Identify account (checking or savings) using function keys;
- Enter amount using function keys or numeric pad;
- Verify amount using function keys or numeric pad;
- Remove cash from cash dispenser;
- Insert deposit or payment envelope in depository;
- Remove receipt from receipt dispenser; and
- Remove bank card from card reader.

Furthermore, during inclement weather and colder temperatures, ATM users will be wearing coats and jackets which may limit their reach range. It is unlikely that ATM users will remove their coats and jackets for the short time that they use the machines, especially if they are outside.

Need for Amendment

Based on the factors discussed above, the Board originally proposed in ADAAG 4.34.3 that accessible ATMs "provide for a parallel approach and both a forward and side reach" to the highest control. See Notice of Proposed Rulemaking (NPRM), 56 FR 2296, 2380 (January 22, 1991). The ABA submitted comments on the NPRM but did not comment on the proposed reach range requirement. Nor did the ATM

[5] InterBold is a general partnership between Diebold, Incorporated and International Business Machines Corporation formed in October 1990.

[6] The petitioners captioned their request as a "[p]etition to clarify the reach range and approach requirements for ATMs" and asked the Board to "clarify that ADAAG Section 4.34.3 does not require new ATMs to allow both a forward and side reach." Petition at 13. The Board agrees with its General Counsel's response to the ABA's earlier letter that ADAAG 4.34.3 specifically states that "a parallel approach and both a forward and side reach" must be provided to the highest control on accessible ATMs and treats the petition as a request to amend ADAAG 4.34.3 to allow either a side reach or a forward reach.

[7] About 8,500 new ATMs were sold in the United States during 1991. InterBold made 45% of the machines; NCR Corporation made 43%; and Fujitsu Systems of America made 10%. Nielsen Report (February 1992); Bank Network News (October 26, 1991).

[8] Some models may be used as either a drive-up or a walk-up ATM. Table 1 includes information on theses models.

[9] Two ATM models can be installed with the controls on the same vertical plane as the wall for a zero horizontal reach. See Table 1, note j.

manufacturers submit timely comments on the provision.[10] The Board made numerous revisions to the proposed ADAAG based on comments in response to the NPRM. However, in the absence of timely comments, the reach range requirement for accessible ATMs was unchanged from the NPRM.

In light of the new information provided by the ATM manufacturers about the highest control on their current ATM models, the Board has initiated a further review of the reach range requirement for accessible ATMs. As shown in Table 1 attached to this document, current ATM models have horizontal reaches to the highest control which range from 1-½ inches to 16-¾ inches.[11] Current ATM models do not have clear floor space under them and, thus, the horizontal reaches do not strictly comply with the requirement for a forward reach over an obstruction. See ADAAG 4.2.5 and Figure 5(b). It has been suggested that the horizontal reach can be minimized for walk-up ATMs installed through-the-wall by recessing the wall under the machine to provide knee clearance for wheelchair users. Recessing the wall under ATMs would allow for a forward reach to some current ATM models but not others, depending on the thickness of the wall.[12] Recessing the walls under ATMs may also pose security issues.

The petitioners request that the Board amend ADAAG 4.34.3 to allow either a side reach or a forward reach to the highest control on accessible ATMs. A side reach would allow the highest control to be placed at a maximum height of 54 inches from the floor where the horizontal reach does not exceed 10 inches. See ADAAG 4.2.6 and Figure 6(b). If the horizontal reach to the highest control is between 10 inches and 24 inches, the control must be placed at a maximum height of 46 inches from the floor. See ADAAG 4.2.6 and Figure 6(c). One of the petitioners, InterBold, has two ATM models (1062i and 1072i) that have a horizontal reach greater than 10 inches but only one of the models (1072i) can be installed as low as 46 inches. See Table 1. The second model (1072i) is a walk-up ATM installed through-the-wall and if the floor level on the back side of the machine is higher than the floor level on the front side of the machine by as much as a fraction of an inch, this model would not comply with the side reach requirement.[13] Furthermore, if banks install surrounds around ATMs and the surrounds project a few inches over the clear floor space provided for a parallel approach in from of the machine, most of the other current ATM models would have a horizontal reach greater than 10 inches and need to be installed with the highest control at a maximum height of 46 inches from the floor to comply with the side reach requirement. See ADAAG 4.2.6 and Figure 6(c). A number of current ATM models cannot be lowered to this height. Thus, the amendment proposed by the petitioners will not fully resolve the issues raised by the petition.

The Board is considering amending ADAAG 4.34.3 to specifically incorporate dimensions for vertical and horizontal reaches to the highest control on accessible ATMs from a parallel approach and requests comments on the issues discussed below. The dimensions will be determined through this rulemaking.

Vertical Reach From Parallel Approach[14]

When the Board originally proposed in ADAAG 4.34.3 that accessible ATMs "provide for a parallel approach and both a forward and side reach," the Board intended that the vertical reach to the highest control from a parallel approach not exceed 48 inches.[15] Many current ATM models have stands or adjustable legs and can be lowered so that the highest control is not more than 48 inches from the floor. Only 4 of the 18 current ATM models in Table 1 attached to this document cannot be lowered to provide a maximum 48 inch vertical reach to the highest control.

The petitioners contend that installing the highest control on some current ATM models to provide a maximum 48 vertical reach would require bending and substantial downward adjustment of the arms and hands from a standing position, making ATMs less comfortable for others to use, as well as presenting difficulties for persons with vision impairment and persons who use walkers, canes, braces, crutches, and leg prostheses. Petition at 6.

The Board requests comments on what the maximum vertical reach should be to the highest control on accessible ATMs from a parallel approach. In particular, the Board seeks pertinent information on the following:

(1) For those ATM models that can be lowered to provide a maximum 48 vertical reach to the highest control from a parallel approach but which manufacturers believe would be less comfortable or more difficult for others to use, the Board is interested in data and studies on the ergonomic zones for each user group: adults at a standing position; wheelchair users; persons who use other mobility aids (e.g., walkers, canes, braces, and leg prostheses); persons with vision impairments; and elderly persons. If the ergonomic zones vary depending on the configuration of the ATM controls and fascia, separate data should be provided for each model in question.

(2) Banks do not always install ATMs with the highest control at the vertical reach recommended by the manufacturers. The Board is interested in the views of banks which have installed ATMs with the highest control at 48 inches or less from the floor, including why a lower vertical reach was selected and reactions from customers who use the machines. To be useful, the comments should include the ATM model and the vertical reach measured from the floor to the highest control.[16]

(3) The Board is also interested in the views of ATM users, including wheelchair users; persons who use other mobility aids (e.g., walkers, canes, braces, crutches, and leg prostheses); persons with vision impairments; and elderly persons, regarding their experiences with reaching and using ATM controls.[17] To be useful, the comments should include the ATM model, if known, and the vertical reach measured from the floor to the highest control.[18]

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[10] The comment period closed on March 25, 1991. The Board received a late comment from NCR Corporation on July 3, 1991 noting a potential conflict between ADAAG 4.27.3 which generally requires the highest operable part of a control to be placed within at least one of the reach ranges specified in ADAAG 4.2.5 (forward reach) and 4.2.6 (side reach), and ADAAG 4.34.3 which specifically requires accessible ATMs to provide "both a forward and side reach to the unit."

[11] See note 9, supra.

[12] Walls usually range from 3 inches to 10 inches in thickness.

[13] Inside and outside floor levels typically vary from zero to six inches.

[14] The vertical reach is measured on the vertical plane from the clear floor space provided for a parallel approach adjacent to the machine to the horizontal plane at the level of the highest control. See Figure 1 attached to this document.

[15] The Board notes that California has recently proposed to amend its building code to provide for a maximum 48 inch vertical reach to the highest control on accessible ATMs.

[16] See note 14, supra.

[17] The Board has received comments on the proposed ADAAG that the maximum 54 inch side reach specified in ADAAG 4.2.6 is not readily accessible to and usable by some wheelchair users. See 56 FR 35408, 35430 (July 26, 1991). Ergonomic data for wheelchair users are usually given for persons with full upper body mobility. Wheelchair users who have limited upper body mobility may not reach as far. N. Diffrient, A. Tilley, & J. Bardagjy, "Humanscale 1/2/3," Selector 3a, note (Henry Dreyfuss Associates Designers, 1974). Ergonomic data show that the comfortable reach zone for wheelchair users is between 36 inches and 48 inches. Id., Manual at 28.

[18] See note 14, supra.

(4) For those ATM models that manufacturers believe cannot meet a maximum 48 inch vertical reach to the highest control from a parallel approach, the Board is interested in receiving information on possible design and technology solutions. The Board is encouraged by the creative solutions developed to date by manufacturers to make some of their ATM models accessible. InterBold has developed an "enhanced access" fascia which allows the highest control in its 1072i model to be placed at 46 inches while retaining the upper height profile of the machine. Fujitsu Systems of America has developed an optional software enhancement that allows transactions to be selected from either the cathode ray tube (CRT) function keys or the numeric keyboard which is located below the CRT function keys. In models with this software enhancement, the card reader is the highest control which wheelchair users need to access and it can be placed at a vertical reach of 48 inches or less. The Board is also interested in information on the time and cost involved for the possible redesign solutions.

(5) For ATMs installed through the wall, the vertical reaches shown in Table 1 attached to this document are achievable where the floor level at the front side of the machine is equal to or higher than the floor level at the back side of the machine. In new construction, accessible ATM locations should be planned and designed so that this condition can be met. When existing buildings are altered for ATMs, this condition may not always be met (i.e., the floor level at the back side of the machine may be higher than the floor level at the front side of the machine). In an alteration, if strict compliance with new construction requirements is technically infeasible, the alteration must provide the maximum accessibility feasible. See 28 CFR § 36.402(a) and (c); ADAAG 4.1.6(1)(j). If the floor level at the back side of the ATM is higher than the floor level at the front side of the machine, it may not be feasible to cut away the higher floor level due to water seepage and other structural problems. It has been suggested, however, that it may be feasible to install a ramp with a landing at the front side of the ATM to achieve the required vertical reach. The Board seeks information on inside and outside floor level variances in existing buildings and the suggested solution of installing a ramp to achieve the required vertical reach.

(6) The petitioners contend that a 54 inch vertical reach provides more functional space than a 48 inch vertical reach for ATMs to offer additional features such as postage stamps, mass transit tickets, and voice response for persons with vision impairments. Petition at 8. The Board is interested in hearing whether these features can also be provided on ATMs with a 48 inch vertical reach.

(7) The Board is also interested in information on the cost of compliance with the current reach requirement in ADAAG 4.34.3 and any proposed change to the provision.

Horizontal Reach From Parallel Approach [19]

The Board requests comments on what the maximum horizontal reach should be to the highest control on accessible ATMs from a parallel approach. The Board is particularly interested in the dimensions of common ATM surrounds, especially how far they project into the minimum 30 inch by 48 inch clear floor space provided for a parallel approach adjacent to the machine. The Board is also interested in any studies or other information on the relationship between recessed controls and privacy and security.

The Board recognizes that the maximum vertical and horizontal reaches to the highest control are interrelated and commenters should take this interrelationship into account. The Board further recognizes that the configuration of the ATM controls, including the distance between the controls and the angle at which they are placed, can affect the usability of the machine and also requests comments on this issue.

Used ATMs

ATMs have an average 10 to 15 year useful life. As banks purchase new ATMs, they usually redeploy older ATMs to locations where anticipated transaction volume is not high enough to warrant the expense of a new ATM. The ATM models listed in Table 1 attached to this document are largely fourth generation machines. Most third generation ATMs can meet a maximum 48 inch vertical reach to the highest control from a parallel approach. The Board is interested in receiving information on used ATMs which cannot meet a maximum 48 inch vertical reach to the highest control from a parallel approach. To be useful, comments should include the ATM model number and the lowest vertical reach possible as measured from the floor to the highest control.[20]

Public Hearing

The Board has scheduled a public hearing in Washington, DC on May 28, 1992, 9:00 a.m. to 5:00 p.m., to hear from ATM manufacturers, banks, individuals with disabilities, and others who will be affected by the rulemaking. The hearing will be held at the Holiday Inn Crown Plaza, 775 12th Street, NW., Salon C, Washington, DC 20005. Persons who wish to present oral comments at the public hearing are encouraged to register in advance by calling the telephone numbers listed at the beginning of this notice. A block of time will be reserved in the afternoon of May 28th for those who wish to register on the day of the hearing. Persons who register in advance will be notified by May 22, 1992 of the time assigned to make their presentation. If there is not adequate time to hear from all those wishing to present oral comments, the Board reserves the right to select among those wishing to speak in order to ensure that a range of viewpoints and interests is represented.

The public hearing site is accessible to individuals with disabilities. Sign language interpreters and an assistive listening system will be available for individuals with hearing impairments.

Dated: April 29, 1992.

For the Architectural and Transportation Barriers Compliance Board.

Gordon H. Mansfield,

Chair of the Board.

Attachment—Table 1 and Figure 1

[19] For ATMs installed through the wall, the horizontal reach is measured on the horizontal plane from the vertical plane of the wall to the highest control. See Figure 1 attached to this document. The horizontal reach can be extended by surrounds that project into the clear floor space provided for a parallel approach adjacent to the machine. For lobby ATMs that are not enclosed, the horizontal reach is measured on the horizontal plane from the vertical plane of the base of the machine to the highest control.

[20] See note 14, supra.

TABLE 1.—CURRENT ATM MODELS

Model	Highest control	Vertical reach from floor to highest control when ATM installed		Horizontal reach from wall to highest control [a]
		Per manufacturer's recommendation	At lowest possible height	
NCR Corporation				
5070 [b]	Receipt Dispenser	45"	45"	7"
5084	Statement Printer	49"	33"	7⅛"
5085	Card Reader	54"	38"	6½"
5674 [c]	Card Reader	53"	53"	8⅛"
5675 [c]	Card Reader	53"	53"	8⅛"
5684	Card Reader	54"	38"	8⅛"
5685	Card Reader	54"	38"	8⅛"
5663 [d]	Card Reader	43"	43"	6½"
5682 [e]	Card Reader	51"	51"	3½"
InterBold				
1060i [b]	Swipe Card Reader	54" (with 36" pedestal)	18" (without pedestal)	6⅛"
1061i [d]	Keypad	54" (with 36"pedestal)	18" (without pedestal)	6⅛"
1062i [b]	Card Reader	50"	50"	14"
1070i [i]	Card Reader	53"	38"	9½"
1072i [f]	Card Reader	46"	46"	16⅝"
Fujitsu Systems of America				
7010 [b]	CRT Function Keys [g]	53¼"	48"	1½"
	Card Reader [h]	48"	42⅜"	1½"
7020 [b]	CRT Function Keys [g]	53¼"	48"	1½"
	Card Reader [h]	48"	42⅜"	1½"
7030 [i]	CRT Function keys [g]	47¼"	42"	[j] 5½"
	Card Reader [h]	42"	36⅜"	[j] 5½"
7040 [i]	CRT Function Keys [g]	53¼"	48"	[j]5½"
	Card Reader [h]	48"	42⅜"	[j] 5½"

[a] For lobby ATMs, the horizontal reach is measured from the vertical plane of the base of the machine, unless otherwise noted.
[b] Lobby ATM.
[c] This model may also be used as a lobby ATM. Data in this chart is for through-the-wall installation.
[d] Information only (noncash) ATM.
[e] Interactive sales platform ATM.
[f] This model has an "enhanced access" facia to make the machine more comfortable to use from a standing position.
[g] This model has an optional software enhancement that allows transaction selection from either the CRT function keys or the numeric keyboard which is located below the CRT function keys.
[h] In model with software enhancement that permits transactions to be selected from the numeric keyboard, the card reader is the highest control.
[i] This model may be used as either a drive-up or a walk-up ATM. Data in this chart are for walk-up installation.
[j] This model can be installed with the controls on the same vertical plane as the wall for a zero horizontal reach.

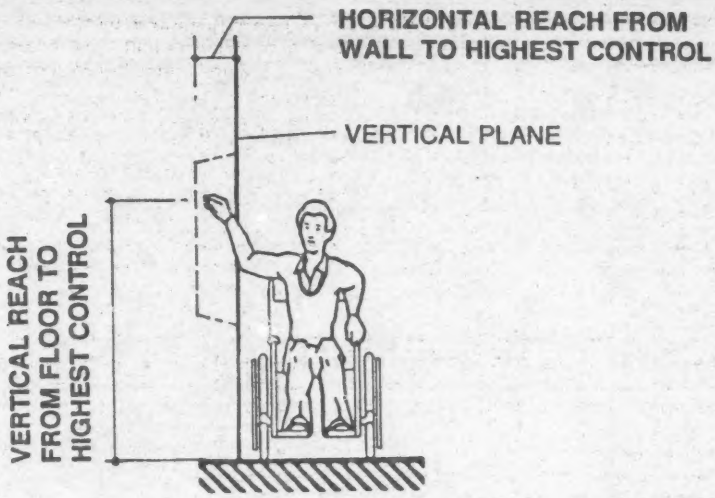

Figure 1

VERTICAL AND HORIZONTAL REACHES TO ATM CONTROLS

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BILLING CODE 6150-01-M